

**Towards a revision of the Italian *Mitostoma*.
1: Subdivision in groups and description of new species
(Arachnida, Opiliones, Nemastomatidae)**

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Towards a revision of the Italian *Mitostoma*. 1: subdivision in groups and description of new species (Arachnida, Opiliones, Nemastomatidae). - The Italian species of the genus *Mitostoma* (Opiliones Nemastomatidae) are here subdivided in groups and three new species are described. *M. fabianae* sp. n. lives on Isola d'Elba and seems to be related to *M. valdemonense* Marcellino; *M. daccordii* sp. n. lives in the Venetian Prealps and shows affinity with *M. orobicum* di Caporiacco, from the Lombardic Prealps. *M. sabbadinii* sp. n. lives in Northern Sardinia and shows no close relationship with any of the other known species.

Key-words: *Mitostoma* - Italy - new species - taxonomy - revision.

INTRODUCTION

The genus *Mitostoma* is a typical European element, distributed, according to MARTENS (1978), from the Iberian peninsula to Caucasus. The species are not very numerous, but the systematic subdivision of the genus is still unclear. After examining abundant material from different Italian regions, we have made two main observations:

- 1) the species easily identifiable in Italy are many more than described up to day;
- 2) these species can be grouped by means of easily observable external characters.

The characters of the penis, very useful at the genus level in the family Nemastomatidae (SILHAVY 1966), are in our opinion of very little help for a specific differentiation. This occurs because the pieces of the glans are composed of very complicate structures, whose appearance varies considerably even with extremely small rotations. For this reason, and since the external characters are much easier to observe, we have decided not to use them in this work. In spite of this, having

examined the penes of all the Italian species, we can say here that they all are very similar to those figured by SILHAVY (1966), MARTENS (1978) and CHEMINI (1985) for different species of *Mitostoma*.

With this work our aim is to present our proposal of dividing the genus into groups and to revise some of these groups describing three new species. Only the *chrysomelas*-group will be left outside, since the evaluation of some populations requires further studies.

DESCRIPTION

Mitostoma Roewer, 1951

Type-species: *Phalangiium chrysomelas* Hermann, 1804 (by original designation).

M. anophthalmum-group: characterized by eyes reduced or absent, absence of longer hairs on all legs, almost glabrous body, chelicera of large size with small apophysis on segment 1 and no supplementary apophysis on segment 2, size large. Legs quite long (ratio femur 1/body = 1.2-1.4). Species included: *M. anophthalmum* (Fage, 1946), *M. patrizii* Roewer, 1953.

M. sabbadinii-group: characterized by normally developed eyes, long, perpendicular hairs interspersed with normal, short ones on all legs, body covered with dense hairs, chelicera of normal size with small apophysis on segment 1 and no supplementary apophysis on segment 2, size small. Legs very short (ratio femur 1/body = 0.8). Species included: *M. sabbadinii* sp. n.

M. orobicum-group: characterized by normally developed eyes, long, perpendicular hairs interspersed with normal, short ones on all legs, glabrous body, chelicera of normal size with very large apophysis on segment 1 and no supplementary apophysis on segment 2, size medium. Legs of medium length (ratio femur 1/body = 1.1-1.2). Species included: *M. orobicum* (di Caporiacco, 1949), *M. daccordii* sp. n.

M. valdemonense-group: characterized by normally developed eyes, absence of longer hairs on all legs, glabrous body, chelicera of normal size with small apophysis on segment 1 and a supplementary tooth on segment 2, size medium or small. Legs quite long (ratio femur 1/body = 1.2-1.6). Species included: *M. valdemonense* Marcellino, 1974, *M. fabianae* sp. n.

M. chrysomelas-group: characterized by normally developed eyes, absence of longer hairs on all legs, glabrous body, chelicera of normal size with small apophysis on segment 1 and no supplementary hairs interspersed with normal, short ones on all on segment 2, size medium. Legs very long (ratio femur 1/body = 1.9-2.7). Species included: *M. chrysomelas* (Hermann, 1804), *M. alpinum* Hadzi, 1931.

Some of the features characteristic of these groups are probably only due to convergence (i.e. the reduction of eyes and of hairs in the two cavernicolous species of the *anophthalmum*-group), but others (like the occurrence of two types of hairs on legs, the great size of the apophysis of article 1 of chelicera or the occurrence of an additional apophysis of article 2 of chelicera) have, in our opinion, a stronger

phylogenetical value. In any case, these characters have the obvious advantage that are simple to observe and allow an easy distinction of all species.

The *chrysomelas*-group seems mainly characterized by the absence of the apomorphies typical of the other groups, but at least one character typical of this group is at the apomorphic state, i.e. the extremely long legs, longer than in almost all the other groups. This group is by far the most difficult and many species have been described and later synonymized. Our opinion is that many species still exist to be described, while the real distribution of *M. chrysomelas* remains to be cleared.

Mitostoma patrizii Roewer, 1953

(Figs 1, 8, 15)

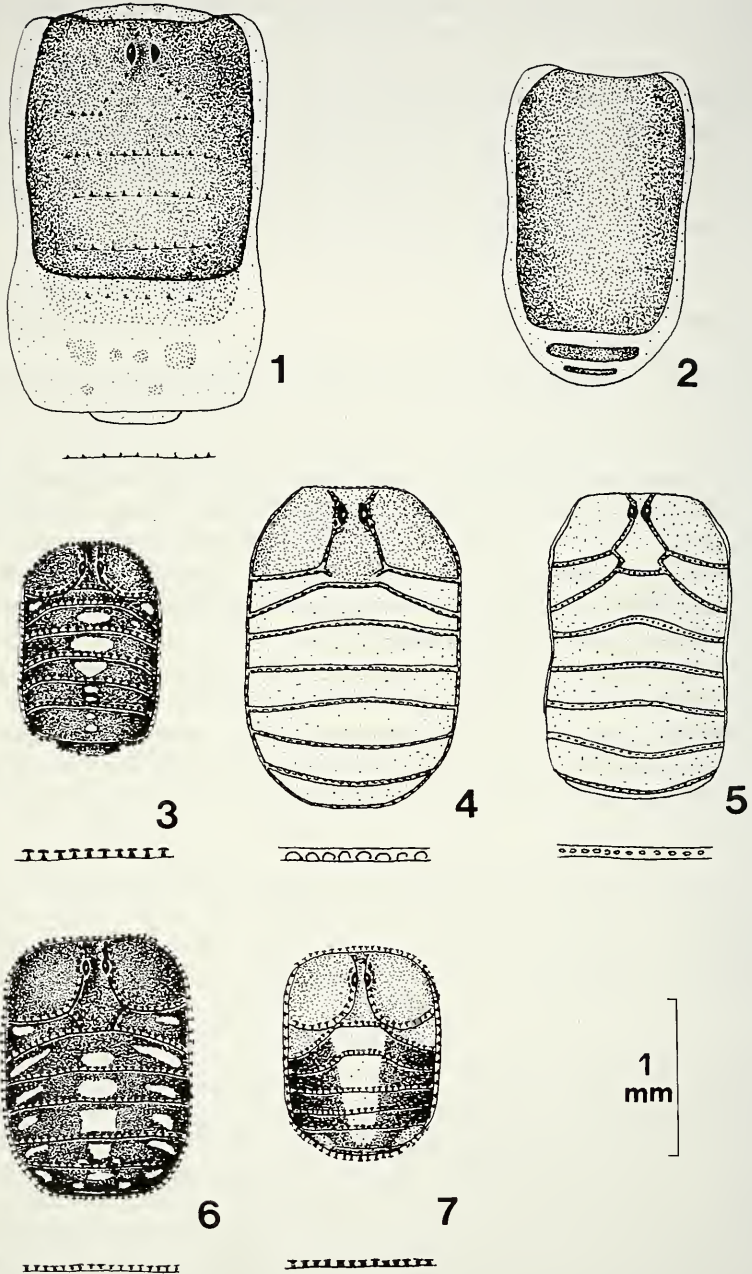
Examined material: 1 ♂ from Sardinia, Nuoro, Urzulei, Grotta Mammenone I, leg. Casale (coll. Tedeschi).

Description. General pattern of the genus. Body length 2.4 mm (♂). Colour yellow with brown scutum and a few rounded spots in the hind part. Body glabrous. Rows of modified tubercles ("processuli ancoriformes" sensu ROEWER 1951; "Brückenzähne" sensu MARTENS 1978) very reduced, partially separating anterior areas of body only. Modified tubercles dark brown, simple, pointed at tip, each completely separated from adjacent ones, gradually decreasing in size at the sides (fig. 1). Eyes reduced, but ocular tubercle present.

Chelicera with a small, rounded apophysis at the distal extremity of segment 1 and a small tooth at the base of segment 2 (fig. 8).

Pedipalps yellowish, very elongate and slender. Legs very elongate, dark brown except trochanters, coxae and base of femora yellowish. Leg 1 of 18 articles; leg 2 measuring 28 mm. All legs with short hairs only, not interspersed with longer, sparse hairs.

Distribution. Known only from eastern Sardinia, where it lives apparently as a real troglobite. Described from the cave Grotta di San Giovanni Domusnovas (ROEWER 1953), it was later reported from two other caves, Grotta Sa Oche and Grotta Toddeitto (ROEWER 1956). In his catalogue of the cave arthropods from Sardinia, CERRUTI (1968) quotes this species from: "Grotte di San Giovanni Ispinigòli, sa Oche e dell'Arciprete", not mentioning new specimens. The name "Grotta dell'Arciprete" indicates the same cave called "Grotta Toddeitto", but the other quotation rises a problem. In fact, the Grotta di San Giovanni Domusnovas is in the province of Cagliari, at the southern end of Sardinia, while the Grotta di San Giovanni Ispinigòli is in the province of Nuoro, at the east of the region. The most probable explanation is that ROEWER has written a wrong name on the original description of the species, while CERRUTI knew very well Patrizi's speleological explorations and findings. In the beginning of his work CERRUTI lists the first speleological expeditions carried on in Sardinia and writes that in 1952 Patrizi explored for biospeleological purposes the caves of the province of Nuoro. So, we assume that the type-locality of this species is not the cave mentioned by ROEWER, but the cave "Grotta di San



FIGS 1-7

Habitus and details of rows of modified tubercles of *M. patrizii* (1), *M. anophthalmum* (2), *M. sabbadinii* (3), *M. orobicum* (4), *M. daccordii* (5), *M. valdemonense* (6), *M. fabianae* (7).

Giovanni Ispinigòli" (= Grotta di San Giovanni su Anzu), in the province of Nuoro. Also the cave from which the specimen seen by us (Gr. Mammenone I) is in the province of Nuoro, relatively close to the three caves already known for the species.

A f f i n i t i e s . This species is similar in several characters to *M. anophthalmum* (Fage 1946), the only other Italian species with modifications related to troglobitic habits. The main differences, listed also in the key, are the persistence of eyes and of rows of modified tubercles. Moreover this is the largest Italian species of the genus.

Mitostoma anophthalmum (Fage, 1946)

(Figs 2, 9, 15)

Examined material: 2 ♂♂ 1 ♀ from Lombardy, Bergamo, S. Omobono Imagna, Gr. dei Morti 1042 Lo/Bg, leg. Piva (coll. Muséum d'histoire naturelle, Genève, coll. Tedeschi). 1 ♂ juv. from Lombardy, Bergamo, Rota Imagna, Gr. Tomba del Polacco 1003 Lo/Bg, leg. Monzini (coll. Tedeschi). 1 ♂ 1 ♀ from Lombardy, Bergamo, Bedulita, Nala di S-Ciupi, 1245 Lo/Bg, leg. Regalin (coll. Tedeschi).

Description. Quite atypical within the genus in the total absence of rows of modified tubercles and of eyes. Body length 2.0-2.3 (♂) 2.5 (♀) mm. Body testaceous with brown scutum. Hairs absent from body and legs. Eyes completely atrophied, ocular tubercle indistinguishable (fig. 2).

Chelicera with a small, pointed apophysis at the distal extremity of segment 1 and a small tooth at the base of segment 2 (fig. 9).

Pedipalps very elongate, brown. Legs very elongate, brown. All legs with short hairs only, not interspersed with longer, sparse hairs.

D i s t r i b u t i o n . Known only from Lombardy, where it has been found in several caves in the province of Bergamo. The localities of which we directly know it are: Grotta grande della Cava di Burligo (loc. typ.), Gr. Tomba del Polacco, Gr. di Val d'Adda (MARTENS 1978), Gr. dei Morti, Nala di S-Ciupi. Other caves from which the species is known are: Fonteno, Taberna de la Bressana, 1110 Lo/Bg; Grone, Pozzo Minimale, 3740 Lo/Bg; Grone, Pozzo del Bosco Faet, 1127 Lo/Bg; Adrara San Rocco, Grotta Lacca, 1124 Lo/Bg; Vigolo, Lacca del Pirù, 3627 Lo/Bg; all Chemini det. (Regalin, in prep.). These data prove that its distribution, until now believed to be limited to the area immediately at the east of Como Lake, extends in all the Orobic Prealps as far as the Iseo Lake.

A f f i n i t i e s . This species is similar to *M. patrizii* Roewer, 1953, but easily distinguished by the total absence of eyes and of rows of modified tubercles. It is quite likely that this group is paraphyletic, since the characters separating the two species composing it are regressive. Anyway, missing any information on their derivation we consider the group as valid. In case that new characters or new species should be discovered allowing to better understand its affinities, we believe that they will be with the *chrysomelas*-group.

Mitostoma sabbadinii sp. n.

(Figs 3, 10, 15)

Type material: Holotypus ♂ from Sardinia, Sassari, North slopes of M. Limbara, 11.XII.1992, leg. Sciacy and Sabbadini, in coll. Muséum d'histoire naturelle, Genève. Paratypes: 8 ♂♂ and 4 ♀♀ with the same data as Holotypus, in coll. Tedeschi.

D i a g n o s i s . Only known species of *Mitostoma* of the *sabbadinii*-group, with small, dark, hairy body with whitish spots and legs with long hairs interspersed with short, stiff hairs.

D e s c r i p t i o n . General pattern of the genus. Body length 1.2-1.3 (♂) - 2.3-2.9 (♀) mm. Body dark brown with some whitish spots: 1 medial and two lateral on segment 1, only one medial on all other segments. Black rows of modified tubercles on posterior margin of all thoracical tergites and abdominal areae of body. Space between the anterior margin of prosoma and first row of tubercles quite large, representing nearly 1/4 of total length of body. Modified tubercles T-shaped, each well separated from adjacent ones (fig. 3).

Chelicera with a very small apophysis at the distal extremity of segment 1 and a small tooth at the base of segment 2 (fig. 10).

Pedipalps blackish, not very elongate. Legs rather short, entirely dark brown. All legs with long, sparse hairs interspersed with short, dense ones. Morphometric characters of legs as in tab. 1; number of tarsal articles and of pseudoarticulations as in tab. 4; ratios legs/body and femurs/body as in tab. 5.

D i s t r i b u t i o n . Known only from the type locality, a mountain in north Sardinia whose interesting fauna often shows Corsican affinities.

Derivatio nominis. The species is cordially dedicated to our colleague and friend Andrea Sabbadini from Milan, who collected the first specimens of the new species during a collecting trip with one of us immediately noting its interest.

A f f i n i t i e s . This species is very isolated within the genus. Its most peculiar character is the occurrence on all legs of long hairs interspersed with short dense ones. While in the *orobicum*-group the long hairs are interspersed with short, normal hairs very similar to those of all the other species, here these are transformed into spine-like hairs, short and very dense. Another peculiar character is the occurrence of a dense pubescence on all body segments, mainly ventrally, but also dorsally.

Mitostoma orobicum (di Caporiacco, 1949)

Examined material: 2 ♂♂ 1 ♀ from Lombardy, Bergamo, M. Arera, leg. Tedeschi (coll. Muséum d'histoire naturelle, Genève, coll. Tedeschi); 1 ♂ 1 ♀ from Lombardy, Bergamo, Monte Madonnino m 2300, leg. Valle, Quirci (coll. Museo Civico di Storia Naturale, Bergamo, coll. Tedeschi).

D e s c r i p t i o n . General pattern of the genus. Body length 2.0 (♂) - 2.9 (♀) mm. Colour yellow-brownish, slightly darker on anterior part; ocular tubercle dark brown. Body glabrous. Rows of modified tubercles well developed, on posterior margin of all

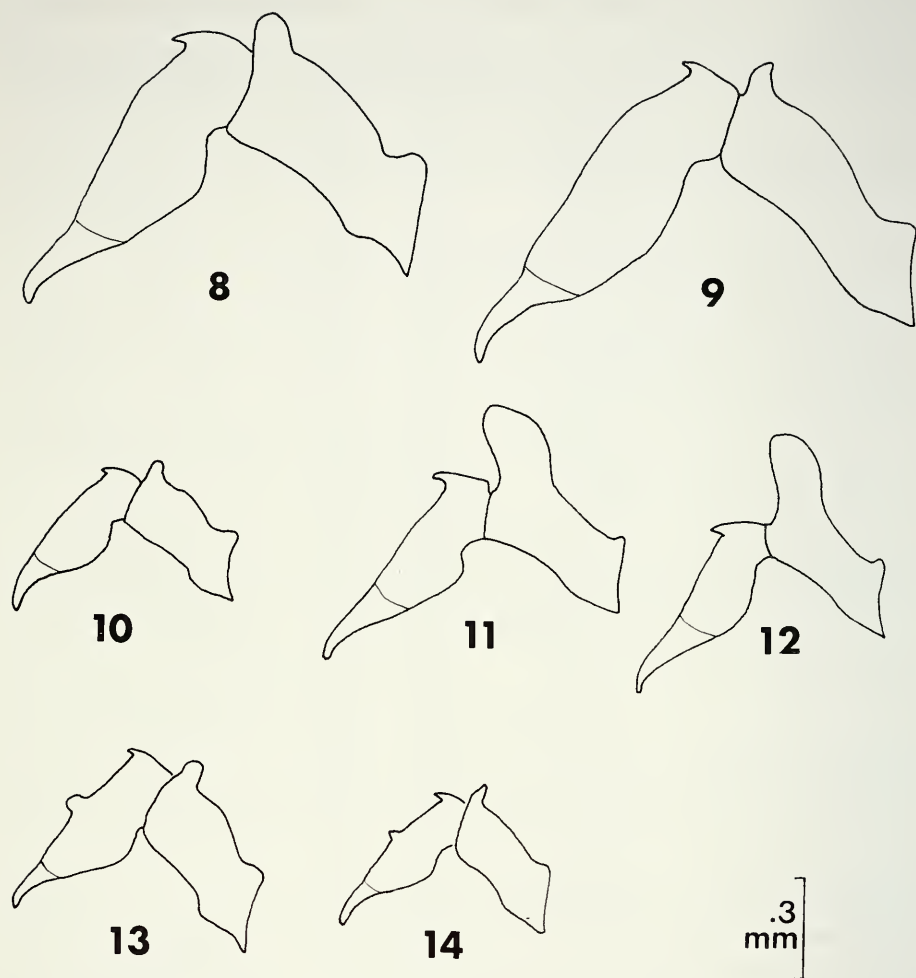
TAB. 1 - Morphometrical data of *M. sabbadinii* (in mm).

	<i>M. sabbadinii</i>	
	Male	Female
Pedipalpus	2.2	3.3
Femur	0.6	1.0
Patella	0.7	1.1
Tibia	0.6	0.8
Tarsus	0.3	0.4
Leg 1 (tot.)	4.4	5.2
Trochantere	0.2	0.2
Femur	1.0	1.2
Patella	0.4	0.4
Tibia	0.9	1.0
Metatarsus	1.0	1.5
Tarsus	0.9	0.9
Leg 2 (tot.)	8.4	8.5
Trochantere	0.2	0.2
Femur	2.2	2.0
Patella	0.5	0.4
Tibia	1.8	1.6
Metatarsus	2.6	2.8
Tarsus	1.2	1.5
Leg 3 (tot.)	4.8	5.3
Trochantere	0.2	0.2
Femur	1.2	1.4
Patella	0.3	0.3
Tibia	0.9	1.0
Metatarsus	1.4	1.5
Tarsus	0.8	0.9
Leg 4 (tot.)	6.7	6.8
Trochantere	0.2	0.2
Femur	1.8	2.0
Patella	0.3	0.3
Tibia	1.2	1.3
Metatarsus	2.2	2.1
Tarsus	1.0	0.9

thoracical tergites and abdominal areae of body. Space between the anterior margin of prosoma and first row of tubercles of medium size, representing about 1/4 of total length of body. Ocular tubercle with two rows of modified tubercles. Modified tubercles dark brown, all fused, although less than in *M. daccordii*, and forming a sort of long "bridge" (fig. 4). Eyes normally developed, ocular tubercle present.

Chelicera with a very large apophysis at the distal extremity of segment 1 and a large tooth at the base of segment 2 both even larger and slightly different than in the preceding species (fig. 11).

Pedipalps brownish, elongate and slender. Legs very elongate, entirely dark brown. All legs with short hairs and longer, sparse, yellowish hairs intermingled. Morphometric characters of legs as in tab. 2; number of tarsal articles and of pseudoarticulations as in tab. 4; ratios legs/body and femurs/body as in tab. 5.



Figs 8-14

Left chelicera in lateral view of *M. patrizii* (8), *M. anophthalmum* (9), *M. sabbadini* (10), *M. orbicum* (11), *M. daccordi* (12), *M. valdemonense* (13), *M. fabianae* (14) (schematic, only to show position and shape of apophyses; hairs omitted).

D i s t r i b u t i o n . Known only from the type locality and a second one here mentioned for the first time, Monte Madonnino. In two nearby mountains, M. Alben and M. Presolana, there lives a species of the *chrysmelas*-group still in study.

A f f i n i t i e s . This species was regarded as a synonym of *M. chrysmelas* by MARTENS (1978) but was later revalidated and redescribed by CHEMINI (1985). In this

work we consider these two species as forming a distinct group characterized by the occurrence of a very large apophysis on segment 1 of chelicera and of two kinds of hairs on all legs.

TAB. 2 - Morphometrical data of *M. orobicum* and *M. daccordii* (in mm).

	Male		Female	
	<i>M. orobicum</i>	<i>M. daccordii</i>	<i>M. orobicum</i>	<i>M. daccordii</i>
Pedipalpus	4.1	3.8	5.1	-
Femur	1.2	1.1	1.6	-
Patella	1.3	1.2	1.6	-
Tibia	1.0	1	1.3	-
Tarsus	0.6	0.5	0.6	-
Leg 1 (tot.)	8.5	7.0	8.4	-
Trochantere	0.2	0.2	0.2	-
Femur	2.3	2	2.4	-
Patella	0.4	0.4	0.5	-
Tibia	1.7	1.3	1.6	-
Metatarsus	2.4	2.0	2.4	-
Tarsus	1.5	1.1	1.3	-
Leg 2 (tot.)	14.1	9.9	13.2	-
Trochantere	0.2	0.2	0.2	-
Femur	3.5	3.0	3.5	-
Patella	0.5	0.5	0.5	-
Tibia	3.2	2.0	3.0	-
Metatarsus	4.4	3.0	4.0	-
Tarsus	2.3	1.2	2.0	-
Leg 3 (tot.)	9.2	7.0	8.4	-
Trochantere	0.2	0.2	0.2	-
Femur	2.5	2.0	2.5	-
Patella	0.4	0.3	0.5	-
Tibia	1.8	1.4	1.5	-
Metatarsus	2.8	2.0	2.5	-
Tarsus	1.5	1.1	1.2	-
Leg 4 (tot.)	11.9	7.2	10.9	-
Trochantere	0.2	0.2	0.2	-
Femur	3.5	2.0	3.5	-
Patella	0.5	0.4	0.5	-
Tibia	2.4	1.4	2.1	-
Metatarsus	3.6	2.0	3.2	-
Tarsus	1.7	1.2	1.4	-

Mitostoma daccordii sp. n.

(Figs 5, 12, 15)

Type material: Holotypus ♂ from Veneto, Monti Lessini, Cima Posta, 14.VII.1971, leg. Daccordi, in coll. Tedeschi.

D i a g n o s i s . A *Mitostoma* of the *orobicum*-group, with a very large apophysis on distal end of segment 1 of chelicere and large tooth on proximal end of segment 2; body completely yellow-brownish.

Description. General pattern of the genus. Body length 1.9 (♂) mm. Colour yellow-brownish. Body glabrous. Ocular tubercle smooth. Rows of modified tubercles well developed, on posterior margin of all thoracal tergites and abdominal areae of body. Space between the anterior margin of prosoma and first row of tubercles quite narrow, representing nearly 1/5 of total length of body. Modified tubercles dark brown, all fused and forming a sort of long "bridge" (fig. 5). Eyes normally developed, ocular tubercle present.

Chelicera with a very large apophysis at the distal extremity of segment 1 and a large tooth at the base of segment 2 (fig. 12).

Pedipalps brownish, elongate and slender. Legs very elongate, entirely brown. All legs with short hairs and longer, sparse hairs intermingled. Morphometric characters of legs as in tab. 2 (in boldface we have pointed out those that we regard as more significant differences between this species and *M. orobicum*, the only other known species of this group); number of tarsal articles and of pseudoarticulations as in tab. 4; ratios legs/body and femurs/body as in tab. 5.

Distribution. Known only from the type locality, where is sympatric with *Mitostoma* sp. (prope *chrysomelas*).

Derivatio nominis. Dedicated to our colleague and friend Dr. Mauro Daccordi, of the Museo Regionale di Scienze Naturali, Torino, who collected this interesting specimen and with his usual kindness gave it to us for study.

Affinities. This species is closely related to *M. orobicum* Caporiacco, 1949, regarded as a synonym of *M. chrysomelas* by MARTENS (1978) but revalidated and redescribed by CHEMINI (1985). In this work we consider these two species as forming a distinct group characterized by the occurrence of a very large apophysis on segment 1 of chelicera and of two kinds of hairs on all legs: long, sparse and short, dense.

Mitostoma valdemonense Marcellino, 1974

(Figs 6, 13, 15)

Examined material: 1 ♂ from Sicily, M.ti Nebrodi, Monte Soro, leg. Osella (coll. Tedeschi). 1 ♀ from Basilicata, M. Sirino, leg. Sciaky (coll. Tedeschi).

Description. General pattern of the genus. Body length 1.6 (♂) - 2.1 (♀) mm. Body blackish with silvery spots; black rows of modified tubercles on posterior margin of all thoracal tergites and abdominal areae of body. Space between the anterior margin of prosoma and first row of tubercles quite narrow, representing nearly 3/10 of total length of body. Modified tubercles T-shaped, each well separated from adjacent ones (fig. 6).

Chelicera with a small apophysis at the distal extremity of segment 1; on segment 2, beyond the basal tooth, there is a supplementary apophysis almost at middle of length (fig. 13).

Pedipalps yellow-brownish. Legs yellow-brownish. All legs only with short hairs, not interspersed with longer, sparse hairs. Morphometric characters of legs as in tab. 3; number of tarsal articles and of pseudoarticulations as in tab. 4; ratios legs/body and femurs/body as in tab. 5.

Distribution. Known until now only from a few localities in northern Sicily, on the Nebrodi mountains, and from southern Italy (Calabria) (CHEMINI 1986).

Affinities. This species is related to *M. fabianae*, with which it shares the character of the occurrence of a second apophysis near the middle of segment 2 of chelicera. Besides this, the differences are many and important both in the shape of the body and the structure of chelicere (see figs. 6-7 and 13-14).

TAB. 3 - Morphometrical data of *M. valdemonense* and *M. fabianae* (in mm).

	Male		Female	
	<i>M. valdemonense</i>	<i>M. fabianae</i>	<i>M. valdemonense</i>	<i>M. fabianae</i>
Pedipalpus	3.7	2.1	3.9	3
Femur	1.2	0.7	1.3	1.0
Patella	1.2	0.7	1.3	1.0
Tibia	0.9	0.5	0.9	0.7
Tarsus	0.4	0.2	0.4	0.3
Leg 1 (tot.)	8.2	6.0	6.8	6.2
Trochantere	0.3	0.3	0.3	0.3
Femur	2.6	1.6	1.8	1.7
Patella	0.4	0.3	0.4	0.4
Tibia	1.3	1.2	1.1	1.0
Metatarsus	2.3	2.0	2.0	1.9
Tarsus	1.3	0.6	1.2	0.9
Leg 2 (tot.)	13.7	6.5	11.3	11.1
Trochantere	0.3	0.3	0.3	0.3
Femur	3.4	1.9	2.8	2.7
Patella	0.4	0.3	0.4	0.4
Tibia	2.7	1.1	2.2	2.4
Metatarsus	4.7	1.9	3.6	3.6
Tarsus	2.2	1.0	2.0	1.7
Leg 3 (tot.)	8.2	6.4	6.6	6.7
Trochantere	0.3	0.3	0.3	0.3
Femur	2.4	1.7	1.6	1.2
Patella	0.4	0.3	0.3	0.4
Tibia	1.4	1.2	1.2	1.1
Metatarsus	2.5	2.0	2.1	2.5
Tarsus	1.2	0.9	1.1	1.2
Leg 4 (tot.)	11.1	9.0	8.9	8.2
Trochantere	0.3	0.3	0.3	0.3
Femur	3.2	2.9	2.3	2.2
Patella	0.4	0.4	0.4	0.4
Tibia	2.0	1.7	1.6	1.6
Metatarsus	3.5	2.5	2.8	2.5
Tarsus	1.7	1.2	1.5	1.2

Mitostoma fabianae sp. n.

(Figs 7, 14, 15)

Type material: Holotypus ♂ from Tuscany, Isola d'Elba, North slopes of M. Tambora, 3.I.1992, leg. Sciaky and Polese, in coll. Muséum d'histoire naturelle, Genève. Paratypes: 3 ♂♂ and 4 ♀♀ with the same data as Holotypus, in coll. Tedeschi.

D i a g n o s i s . A *Mitostoma* of the *valdemonense*-group, with an additional apophysis on segment 2 of chelicere, body anteriorly and medially pale reddish and laterally dark brown.

D e s c r i p t i o n . General pattern of the genus. Body length 1.1-1.5 (♂) - 1.9-2.4 (♀) mm. Body anteriorly and medially pale reddish and laterally dark brown, with black rows of modified tubercles on posterior margin of all thoracal tergites and abdominal areae of body. Space between the anterior margin of prosoma and first row of tubercles very large, representing nearly 3/8 of total length of body. Modified tubercles T-shaped, each well separated from adjacent ones (fig. 7).

Chelicera with a small apophysis at the distal extremity of segment 1; on segment 2, beyond the basal tooth, there is a supplementary apophysis almost at middle of length (fig. 14).

TAB. 4 - Number of tarsal articles and of pseudoarticulations in five of the species here treated.

		Tarsal articles				Pseudoarticulations	
		leg 1	leg 2	leg 3	leg 4	Femur	Tibia
<i>M. fabiana</i>	♂	10	17	7	8	5; 11; 4; 7	2; 10; 0; 2
	♀	6	15	5	8	4; 10; 4; 7	0; 10; 0; 0
<i>M. valdemonense</i>	♂	13	22	16	14	6; 14; 6; 9	0; 9; 0; 0
	♀	11	21	15	14	4; 11; 5; 7	0; 7; 0; 0
<i>M. daccordii</i>	♂	11	9	14	8	2; 2; 2; 2	1; 0; 0; 0
<i>M. orobicum</i>	♂	10	14	13	11	2; 7; 2; 4	0; 0; 0; 0
	♀	8	11	11	9	3; 3; 3; 3	0; 0; 0; 0
<i>M. sabbadini</i>	♂	9	18	8	7	3; 8; 2; 5	0; 8; 0; 0
	♀	8	12	7	7	4; 10; 3; 5	0; 6; 0; 0

Pedipalps brown. Legs brown except the distal portion of femora, that is paler. All legs only with short hairs, not interspersed with longer, sparse hairs. Morphometric characters of legs as in tab. 3; number of tarsal articles and of pseudoarticulations as in tab. 4 (in boldface we have pointed out those that we regard as more significant differences between this species and *M. valdemonense*, the only other known species of this group); ratios legs/body and femurs/body as in tab. 5.

D i s t r i b u t i o n . Known until now only from the type locality, a mountain on Isola d'Elba. No other species of this genus are known from the same island; the only Nemastomatidae reported from Isola d'Elba is *Nemastoma perfugium* Roewer, 1951. MARCELLINO (1976) regards this species as very doubtful, since it has never been found again. In any case, from the original description and drawings it is easy to see that it does not belong to the genus *Mitostoma*, but most probably to *Paranemastoma*.

Derivatio nominis: This species is dedicated to Fabiana Polese, who collected with one of us the type series of the new species.

A f f i n i t i e s . This species is related to *M. valdemonense* Marcellino, 1974, with which it shares the characters of the group.



FIG. 15

Distribution map of the species of *Mitostoma* dealt with in this work.

TAB. 5

Body length (in mm), ratio legs/body and ratio femurs/body in five of the species here treated.

		Body length	Ratio legs/body	Ratio femurs/body
<i>M. fabianae</i>	♂	1.3	4.6; 5.0; 4.9; 6.9	1.2; 1.5; 1.3; 2.2
	♀	2.2	2.8; 5.5; 3.0; 3.7	0.8; 1.2; 0.5; 1.0
<i>M. valdemonense</i>	♂	1.6	5.1; 8.6; 5.1; 6.9	1.6; 2.1; 1.5; 2.0
	♀	2.1	3.2; 5.4; 3.1; 4.2	0.8; 1.3; 0.8; 1.1
<i>M. daccordii</i>	♂	1.9	3.7; 5.2; 3.7; 3.8	1.1; 1.6; 1.1; 1.1
<i>M. orobicum</i>	♂	2.0	4.2; 7.0; 4.6; 6.0	1.2; 1.8; 1.3; 1.8
	♀	2.9	2.9; 4.6; 0.9; 3.8	0.8; 1.2; 0.9; 1.2
<i>M. sabbadinii</i>	♂	1.2	3.7; 7.0; 4.0; 5.6	0.8; 1.8; 1.0; 1.5
	♀	2.6	2.0; 3.3; 2.0; 2.6	0.5; 0.8; 0.5; 0.8

KEY TO THE SPECIES

- 1 Segment 2 of chelicera of male with one supplementary apophysis in apical half, beyond the normal basal tooth (*valdemonense*-group). 2
 - Segment 2 of chelicera of male without apophysis in apical half, only with the normal basal tooth. 3
- 2 Body blackish with silvery spots, Sicily. *valdemonense*
 - Body anteriorly and medially pale reddish and laterally dark brown, Isola d'Elba. *fabianae*
- 3 All legs with long hairs interspersed with normal, shorter hairs, perpendicular to the axis of the leg itself. 4
 - All legs only with normal, short, decumbent hairs. 6
- 4 Chelicera with very large apophysis on segment 1. Body not densely pubescent. Legs long. Alps (*orobicum*-group). 5
 - Chelicera with small apophysis on segment 1. Body densely pubescent. Legs short. Sardinia (*sabbadinii*-group). *sabbadinii*
- 5 Ocular tubercle with two rows of modified tubercles. Leg 2 longer (14 mm); tarsus 1 of 14 articles. Orobic Prealps. *orobicum*
 - Ocular tubercle smooth. Leg 2 shorter (10 mm); tarsus 1 of 21 articles. Venetian Prealps. *daccordii*
- 6 Eyes of normal size. Chelicera shorter. Rows of modified tubercles developed and complete. *chrysomelas*-group
 - Eyes reduced or absent. Chelicera very long. Rows of modified tubercles reduced or absent (*anophthalmum*-group). 7
- 7 Eyes reduced but still distinct. Sardinia. *patrizii*
 - Eyes completely absent. Lombardy. *anophthalmum*

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